

TB PMG 21

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CRIMES INVOLVING POISONS



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CRIMES INVOLVING POISONS

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1. **Purpose, Scope, and Comments.** *a.* This bulletin is a guide for military police criminal investigators in the investigation of crimes involving poisons. The term "military police" includes military police criminal investigators. The term "criminal investigator," when used by itself, refers only to the military police criminal investigator.

b. The bulletin covers primarily the investigation of the poisoning of human beings. Where applicable, the procedures may also be useful in investigating the poisoning of animals. Investigative techniques and the securing of statements or evidence must comply with current pertinent legal discussions and policy.

c. Users of this bulletin are encouraged to submit comments and recommended changes. This information on DA Form 1598 (Record of Comments on Publications) should be keyed to the specific page, paragraph, and line of text. A reason should be provided for each recommendation to insure complete understanding and evaluation. Correspondence

should be forwarded direct to The Provost Marshal General, ATTN: PMGS--C, Department of the Army, Washington, D. C., 20315.

2. **Investigative Responsibility.** *a.* The officer exercising special court-martial jurisdiction over the victim is responsible for conducting an investigation to determine the duty status at the time of the poisoning (pars 5-8, AR 600-10). The commander and/or army hospital authorities usually are required to notify the provost marshal of the command of all poison cases that occur.

b. The Army Medical Service is responsible for conducting a medical investigation to determine the immediate cause of a death by suspected poisoning. The results of this investigation are recorded in the report of post-mortem examination. The report is a complete record of all that medical authorities know about the person who has died. It includes a record of—

- (1) Clinical treatment given victim.

This bulletin supersedes TB PMG 21, 10 February, 1955.

- (2) Utterances, statements, or accusations made by victim before death.
- (3) Known facts pertaining to death.
- (4) Immediate cause of death.
- (5) Autopsy.
- (6) Pathological and toxicological examinations conducted in support of autopsy.
- (7) Medical examinations of items of physical evidence.

c. The military police criminal investigator investigates a poisoning when a crime is suspected and when requested to do so by the provost marshal. It is important for the criminal investigator to provide the pathologist, designated to perform the postmortem examination, with information concerning the circumstances of death, on-the-scene investigation, and the type of poison suspected. On occasion, the pathologist may provide assistance to the criminal investigator during the investigation at the scene of death. The postmortem examination of persons who die as the result of poisoning may not reveal specific pathologic changes. Knowledge of the circumstances and the scene of death, together with acquisition of scientific evidence prior to the postmortem examination, will enable the pathologist to utilize indicated autopsy techniques and to retain appropriate specimens for toxicological examinations.

d. The provost marshal should request an investigation when:

- (1) The unit commander suspects foul play in a sickness or death by poisoning and requests the provost marshal to investigate.
- (2) The medical authorities report a poisoning or suspected poisoning to the provost marshal.
- (3) Information received through the military police station in the form of an accusation or complaint indicates that a person has been poisoned.
- (4) A military police report is received that a sick or dead person has been encountered by military police under circumstances or displaying symptoms that indicate a poisoning.

e. The commanding officer of a medical treatment facility or the surgeon of the station

or of the command is responsible for ordering that an autopsy be performed upon the body of any person dying in the military service when such procedure is deemed necessary to determine the true cause of death and to secure information for the completion of military records (para 71, AR 40-2). If, in the conduct of a criminal investigation, the provost marshal obtains information that indicates that foul play has been committed, or if the cause of death is unknown or uncertain and the surrounding circumstances are of a suspicious nature, the provost marshal should notify his commanding officer and recommend to him that an autopsy be performed, if one has not already been accomplished.

5. **Poison Prevention Program.** The prevention of poisonings requires an interface and coordination of a variety of military and non-military agencies. Poisonings may be either accidental or intentional.

a. Accidental poisonings occur in all age groups, but are most prevalent in the case of children. Prevention in these cases is a matter of parent-child education, school and installation informational emphasis, and a full scale effort to eliminate, remove, or control sources of poisons. The provost marshal, surgeon, information officer, education officer, engineer, safety officer, and others will have definite responsibilities.

b. The prevention of intentional poisonings, either homicidal or suicidal, is more difficult. Prevention must be aimed at the redirection of the individual. Medical services include psychiatric counseling and social work assistance. Military police contacts and procedures require direction, tact, and firmness. Crime prevention techniques (TB PMG 19) may be appropriate.

4. **Medical Responsibility.** The Army Medical Service has complete medical responsibility, including rendering first aid, providing clinical treatment, and performing autopsies.

5. **Cooperation With Medical Personnel.** Military police may arrive at the scene of a poisoning before medical personnel. If so, they must cooperate closely with medical personnel. Military police must contact medical personnel quickly to secure medical assistance or instructions for bringing the victim to a treatment

facility. They should observe the symptoms the victim exhibits and remember anything that he says or does that may later indicate to medical personnel the type of poison taken. Pertinent evidence, such as bottles, vials, capsules, packages, syringes, or ampules, that may have contained the poison should be seized and made promptly available to medical personnel to assist in determining the poison. If a gas is present where the victim was found, the investigator should, if possible, determine its source and try to identify it. The investigator, however, should have an appropriate gas mask or air pack available before entering a closed space contaminated by unknown gas. These procedures may save lives by enabling medical personnel to proceed promptly with correct treatment. If the victim is unconscious and there is no evidence of the poison taken, military police should observe and report to medical personnel the position of the body when found, the symptoms exhibited, any suspicious odors present, and the circumstance or testimony that indicate that the victim was poisoned. If the victim dies, all evidence and information described above should be made available to the doctor who performs the autopsy. In case of death, if at all possible, the pathologist should visit the scene with the military police before the body is removed or the surroundings altered.

6. Types of Poisonings. a. *Intentional.*

(1) *By voluntary consumption.*

(a) *Self-destruction.* A poisoning is not considered suicide or self-destruction unless the intent of the victim to kill himself is established and the possibility of homicide or accident is eliminated.

(b) *"Calculated risk."* A person may take a "calculated risk" by consuming a small amount of a substance that he knows is poisonous in certain quantities or under certain conditions, such as an alcohol not intended for consumption, a narcotic, or a substance that may assist in malingering or in a criminal abortion. For example, a person may take a poisonous substance to produce symptoms similar to those

of a given disease. Because the difference can be detected only by a doctor, medical assistance is required throughout the investigation. In such a case, the criminal investigator's duties are to ascertain where the person obtained the poisonous substance, to establish whether he had a motive or an intent to malingering, or to find out whether someone helped or advised him to secure and consume the poisonous substance.

(2) *By involuntary consumption.*

(c) Murder and homicide charges may result from a deliberate killing by means of a poisonous substance, assistance in or foreknowledge of a fatal poisoning, gross negligence that leads to a fatal poisoning, a "bad liquor" case, an abortion by chemical means, or the provoking of a person to commit suicide.

(b) A poisonous substance, such as chloralhydrate ("knockout drops"), may be administered preliminary to such crimes as robbery, rape, kidnaping, or murder.

(c) The poisoning of an animal, either as a preliminary to another offense or as a malicious act, is an offense.

b. *Accidental.*

(1) *Occupational.* The criminal investigator ordinarily is not interested in such a case unless criminal or deliberate negligence is suspected. He may study conditions under which a person worked when there is the possibility that a poisonous substance was contacted accidentally rather than through an alleged criminal action.

(2) *Food poisoning.* Accidents or unsanitary conditions may cause food poisoning. Medical authorities usually investigate food poisoning. Counterintelligence personnel may investigate when sabotage is suspected.

(3) *Miscellaneous.*

(a) An overdose of a potentially toxic medicine or drug.

- (b) The accidental taking of a poison.
- (c) The accidental introduction of a poison through an external injury.

7. Poisons Described. a. Corrosive Poisons.

These poisons eat away or destroy body tissue by direct chemical action. They usually are encountered in bleaches, solvents, etching solutions, fertilizers, industrial chemicals, and disinfectants. This class includes some acids and alkalies and a few metallic and organic compounds. Corrosive poisons produce burns, pitted flesh, and lesions or stains in and around the mouth or where they touch the skin. They may stain the clothing. They may cause severe pain in entire intestinal tract and produce vomiting. The color of the vomit will vary, and may indicate the specific poison involved. There usually is a strong odor in the breath and vomit. Shock, collapse, and other secondary symptoms usually appear. Death may follow.

b. Systemic Poisons. These poisons act chemically on the nervous system or the organs of the body without corrosive action. They combine with body substances or enter into body processes, with destructive effect. This class includes many organic poisons (derived from plants or animals), most of the poison gases, and certain metals. The symptoms may not be as obvious as the burns and stains of the corrosives. The symptoms vary widely. The damage is related to the action of each specific substance; the amount consumed, contacted, or inhaled; the manner in which administered (eaten or drunk, inhaled, skin contact, breaks in the skin, or injected into muscles or veins); and whether a tolerance has been acquired through habitual use.

c. Signs After Death. Visible after-death signs vary according to many factors, such as the length of time the person has been dead, climatic conditions, complicating health factors that might have been present, and whether or not any cleaning up (vomit and urine) has been attempted. The usual external after-death symptoms that can be observed by non-medical personnel, and that should be recorded, include—

- (1) Corrosive burns or discolorations about the mouth and on the hands.
- (2) Any unusual or lingering odors about

the body or in the vomit, urine, or feces.

- (3) Unusual appearance or discoloration of the skin.
- (4) Unusual posture of the body. Certain substances cause opisthotonos, which is a bending backward from the heels to the back of the head or a resting on the heels (feet apart) and the back of the head.

8. Offenses Associated with Poisoning. a. Illegal Sales, Provision, or Procurement of Narcotics and Other Dangerous Drugs. The criminal investigator working on a case involving a narcotic or other dangerous drug should ascertain where and how the victim obtained the drug. Law enforcement officials who have jurisdiction over the suspected source should be notified so that steps can be taken to prevent the drug from getting into the hands of other persons.

b. Negligence. A person who fails to observe the proper precautions to prevent a poisonous substance from falling into the hands of a criminal or an irresponsible individual may be charged with negligence (criminal) or simple negligence, depending on the facts. Thorough investigation and prompt action may help to prevent the recurrence of negligence.

9. Evidence To Be Obtained. To determine if poison was voluntarily, involuntarily, or accidentally administered, the investigator should establish:

- a. Who administered the poison.
- b. The specific poison or poisons administered, and the manner, time, and place they were administered.
- c. The intent and motive of the person(s) in administering the poison as alleged.
- d. The manner in which the poison was obtained, from whom, when, in what quantity, and where kept prior to the poisoning.
- e. The effect of the poison upon the victim.

10. The Victim. a. Common Symptoms of Poisoning. Military police should be familiar with the most common symptoms of poisoning. (It should be noted that the symptoms of certain diseases are the same as those which appear after the consumption of certain poisons.) See appendix IV for table of symptoms. If any

one of the following symptoms is detected, medical aid should be sought immediately:

- (1) Excessive vomiting or attempted vomiting.
- (2) Acute internal pains.
- (3) Excessive or uncontrollable diarrhea, urination, or perspiration.
- (4) Bloody saliva, vomit, urine, or feces.
- (5) Delirium, stupor, or coma.
- (6) Muscular spasms and convulsions, contraction of the pupils of the eyes.
- (7) Discoloration, burns, or mucus about the mouth or lips.
- (8) Red spots on the face, chest, or stomach.
- (9) Extremely high or low pulse or breathing rate.
- (10) Peculiar odors on subject's breath, or in vomit, urine, or feces.
- (11) Presence of stains, burns or powders on the subject, his clothing, or articles at the scene.
- (12) Blue discoloration of the body, especially in the lips and finger tips.

b. Warning. In the early stages, the victim may have mild forms of the symptoms of poisoning or no noticeable symptoms. Therefore, if there is any other indication of poisoning, such as the odor of gas or the presence of a suspicious container or substance, a medical officer should be notified immediately or the victim should be taken to a hospital.

c. Medical Assistance.

- (1) *Summoning aid.* If military police reach the scene before medical personnel have arrived, they summon medical assistance immediately. This precaution is also taken when a person with symptoms of poisoning is taken into military police custody.
- (2) *First aid.* Military police never attempt to administer an antidote or medication, even when the poison and its antidotes are known. Failure to follow this rule may result in the person's death, since such first aid treatments may cause negative reactions in some persons (people with heart conditions or allergies to certain medications), and many diseases dis-

play symptoms similar to poisoning, when actually no poisons are involved. There are, however, certain general measures which any person, including military police, should take while waiting for medical assistance or until communications are established with medical authorities. The victim should be treated for shock, kept quiet and warm, and when necessary, restrained so that he will not injure himself. If the victim is in a gassed room or in a vehicle, he should be removed, treated for shock, and given artificial respiration.

d. Precautions. A suspected suicide, if still alive, should be immediately searched for the poisonous substance and for any weapon that he might use to inflict further injuries upon himself.

e. Utterances. What the victim says may be of the utmost importance in establishing that he has been poisoned, and in identifying the type of poison used and, possibly the person who poisoned him. The criminal investigator should take a statement whenever possible, but questioning should not jeopardize the victim's chances for recovery. Military police do not delay seeking medical assistance to gain time in which to interview the victim. The victim's statement may be influenced by his mental and physical condition; it should not be relied upon to the exclusion of other evidence. If the victim makes a statement under the belief of impending death and subsequently dies, his statement may be admissible in a court-martial under the "dying declaration" exception to the hearsay rule. (para 142a, MCM, 1951)

11. The Crime Scene. *a.* Postmortem examination of the victim and toxicological examinations of blood, stomach contents, urine, and organs may provide identification of the poison. In some cases, however, the presence of any one poison may be so difficult to detect that it may not be identified unless medical personnel have some idea as to the type of poison they are looking for. Thus, the crime scene search for the suspected poison is most important.

b. Crime scene investigation also aids in de-

termining whether a poisoning was the result of murder, suicide, or accident.

c. The place where the poison took effect may not be the place where the victim ingested the poison; the victim of a nonfatal poisoning may not even know exactly where he was poisoned.

d. The scene of a murder by poisonous gas may be disguised so as to make it appear that a suicide or an accident occurred.

e. Further guidance concerning the investigation at the crime scene may be found in TB PMG 27 and 30.

12. Cooperation With Civilian Authorities.

a. If a suspect in the poisoning of a military person is a civilian who is not subject to the Uniform Code of Military Justice, or if the suspected source of a poison or poison liquor is located in a civilian area not subject to the commander's jurisdiction, it may be necessary to secure the assistance of appropriate civilian enforcement and investigative agencies, such as the following:

(1) Federal agencies.

(a) Federal Bureau of Investigation.

In any case involving a Federal violation not specifically assigned to other Federal law enforcement agencies.

(b) Bureau of Internal Revenue, Alcohol, and Tobacco Tax Division.

In any case involving a violation of Federal laws relating to the manufacture, storage, and sale of alcoholic beverages.

(c) Bureau of Narcotics.

In any case involving a violation of the narcotic laws.

(d) Food and Drug Administration.

In any case involving violations of the Federal Food, Drug, and Cosmetic Act, Caustic Poison Act, or Hazardous Substances Labeling Act.

(e) Bureau of Drug Abuse Control.

In any case involving illegal traffic of depressant and stimulant drugs in violation of the Drug Abuse Control Amendments.

(2) State, county, and city agencies.

In any case where the suspect and the suspected source of poisons are civilian.

b. The search of premises not located in an area under the jurisdiction of the military commander must be conducted by civilian police agencies (TB PMG 10).

c. Evidence or testimony in the possession of military police tending to link a civilian with the poisoning or death of a military person must be carefully safeguarded and made available to police agencies with authority to investigate and prosecute suspects.

13. The Criminal Investigation Laboratory.

a. Military police criminal investigation laboratories are equipped to analyze items submitted to determine the presence, nature, and amount of poisonous substances. The laboratory tests are most reliable when adequate samples of suspected solutions and materials are submitted. Examinations can be made, however, of very small amounts of material. It may also be possible to determine whether empty containers have recently contained specific poisonous substances.

b. Army medical laboratories are located in each continental army area and in certain overseas areas. Upon request through command channels, these laboratories will also conduct examinations of items of physical evidence to detect the presence of poisonous substances. Since some poisons lose their identity in a short time, examinations of such evidence at an army medical laboratory may be advisable when such a facility is more readily available than a criminal investigation laboratory. Caution should be exercised by both military police and medical personnel to insure that the transfer of evidence between the two agencies does not break the chain of custody that must be maintained to insure the admissibility of such evidence in court. The medical technician should be aware of the legal, as well as the technical, requirements in order to be able to qualify as an expert witness.

c. A criminal investigation laboratory may conduct toxicological examinations on parts of the human or animal body when requested, although these type of examinations usually are performed by the Army Medical Service. (See TB PMG 13 for information on the submission of evidence to criminal investigation laboratories.)

d. Items that may be examined by the criminal investigation laboratory in support of a criminal investigator working on a poisoning case include —

- (1) Samples of urine, vomit, fecal matter, sputum, and blood from the victim, gathered by the criminal investigator, provided that such materials are not needed by medical authorities for diagnostic and autopsy purposes. The laboratory will attempt to identify the foods present in vomit as well as to ascertain the presence of poison. Where a stomach pump has been used, the investigator may submit samples of stomach contents (The decision to submit stomach contents to the criminal investigation labora-

tory is made by the medical officer responsible for treating the victim.)

- (2) Samples of food, medicines, beverages, narcotics, or similar materials that the victim may have consumed. Sinks, pipes and drain traps, garbage cans, cupboards, and refrigerators may contain evidence of the poisonous substance involved. Samples of material such as spices, sugar, flour, and baking soda should be taken, if appropriate, since poison can be easily concealed in such substances. Spilled liquids may be collected through allowing their absorption into a filter paper, which is then placed in a clean glass jar and tightly sealed.



Figure 1. The answers will not always be this apparent.

(3) Containers that are known or thought to have held whiskey, drugs, medicines, food, and beverages consumed by the victim. Medicine containers should be examined for prescription numbers, and name of pharmacy dispensing the item. It is often desirable

in difficult cases to take the entire contents of the medicine chest, allowing a thorough search for materials that might have been taken in sufficient quantities to produce toxic effects.

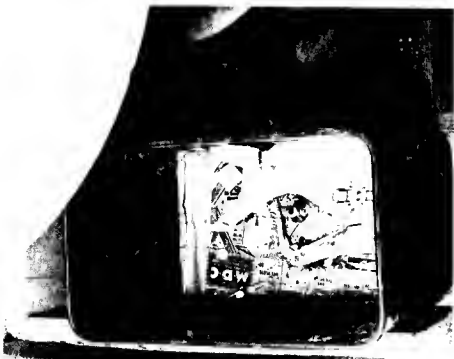


Figure 2. Waste basket contents may reveal the suspected poison and the means of its administration.

- (4) Any item including cups, glasses, and utensils, that may have been used in the preparation or serving of food or drink suspected of having contained the poison.
- (5) Any instrument, or tool, such as a hypodermic needle and syringe, that may have been used in introducing the poisonous substance into the victim's body.
- (6) Samples of fuel or chemicals that may contain the poisonous substance. The samples should be submitted, despite an admission or confession, in any case that may involve criminal charges.
- (7) Soiled linen or clothing which may contain traces of poison in stains from food, liquids, vomit, urine, or other matter



Figure 3. A possible answer to the "how" of poison administration.

APPENDIX I

REFERENCES

1. Military.

- AR 40-2 Army Medical Treatment Facilities General Administration
AR 40-4 Army Medical Service Facilities
AR 600-10 The Army Casualty System
FM 19-20 Military Police Investigations
TM 3-215 Military Chemistry and Chemical Agents
TM 8-285 Treatment of Chemical Warfare Casualties
TM 8-241 Army Social Work
TM 8-246 Army Social Worker Handbook
TB PMG 1 Drug Investigation
TB PMG 10 Search and Seizure by Military Police
TB PMG 27 Crime Scene Processing
TB PMG 30 Investigation of Assaults, Homicide and Suicide

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U.S. Dept of Health, Education and Welfare Public Health Service, *Division of Accident Prevention—Directory Poison Control Centers*, Publication #1278, 1965.

APPENDIX II

GUIDE FOR INVESTIGATING A POISONING

1. Questioning the Victim. If needed, the investigator should question the victim. He should consult the medical officer concerning the length of time the victim can be safely questioned without endangering his chances for recovery. During the questioning he should develop as much of the essential information as is possible under the circumstances. The criminal investigator should keep informed of the recovery of the victim, and question him as often as possible to develop additional pertinent information.

2. Witnesses. The criminal investigator should interview witnesses to develop information regarding the poisoning and investigate to ascertain whether they participated in the poisoning. Witnesses may include:

a. Persons who witnessed the act of poisoning.

b. Persons who have knowledge of a suspect's utterances or actions that would tend to establish a motive for the crime.

c. Persons who have knowledge of the victim's consumption of food or drink within the period of time he probably received the poison.

d. Persons who sold the victim or suspects drugs or medicines.

e. Persons who have knowledge of the victim's movements prior to the time he was stricken.

f. Persons familiar with the victim's habits, particularly:

(1) His eating and drinking habits.

(2) His use of drugs or medicines.

(3) His attempts at self-medication or to receive treatment outside military medical channels.

g. Persons familiar with the victim's financial status, family background, and social life.

3. Essential Information. From the Victim or Witnesses. The criminal investigator should

try to obtain complete answers to the following questions:

(1) Where was the victim when the symptoms first appeared?

(2) What were the symptoms? Were there vomiting, urination, convulsions, delirium, or other physical actions?

(3) Did someone intentionally give the victim the poison? If so, who? What was this person's motive?

(4) Did the victim administer the poison himself? If so, was the poisoning accidental or intentional? What was his reason? Had the victim ever before contemplated or attempted suicide?

(5) Who summoned assistance? When? By what means?

(6) Prior to the appearance of the symptoms, what did the victim do? Where did he go? With whom did he associate?

(7) What did the victim eat or drink prior to the appearance of the symptoms? Where? Did he request the food or beverage, or was it offered to or urged upon him? Who prepared it? Who served it?

(8) Did any other persons consume the same food or beverages as the victim? What was their condition? Did they notice anything peculiar about the food or beverage?

(9) Did the victim notice anything peculiar about the food or beverage? Was he in the habit of eating the food or drinking the beverage in question?

(10) Was the victim in the habit of consuming any form of alcohol not intended for drinking purposes?

- (11) Did the victim eat or drink anything after the symptoms first appeared?
- (12) Did the victim take any medicine prior to the appearance of the symptoms? Was this medicine prescribed by a doctor? Was it given to him by someone other than a doctor or a pharmacist? Where is the container in which this medicine was kept? Did the victim habitually take any kind of medicine? Was the victim addicted to any narcotic drug?
- (13) What was the victim's general health condition prior to this time? Did the victim have any physical or mental ailments? Was the victim under a medical treatment?
- (14) Was the victim unhappy or depressed recently? Was he angry with or jealous of anyone?
- (15) Did the victim have money on his person prior to the symptoms? Does he still have that money in his possession? What was the condition of his estate? Did he owe large sums?
- (16) Who would inherit the victim's estate? Has that person lost money recently? Does he gamble? Does he handle money in his occupation?
- (17) Did the victim have any recent difficulties with regard to his occupation or employment? Did anyone ever accuse him of misconduct or criminal actions?
- (18) Was anyone jealous of the victim because of his position? Will anyone benefit in the event of the victim's death by being promoted to the victim's position?
- (19) Did the victim receive any threatening letters of communications recently? Where are they? How were they disposed of? Who sent them? If they were anonymous, who had a motive for sending them or possessed the information on which they were based?
- (20) Did the victim write any letters recently? To whom? What was the subject matter of the letters?

b. *From the Autopsy.* The autopsy may disclose:

- (1) The approximate time of death.
- (2) The cause of death.
- (3) The specific poison that caused the death, its concentration in the body, and the period of time the poison was in contact with soft tissue before and after death. The identification and analysis of the poison may assist in locating its source. In some cases the specific poison may be unidentifiable due to the dose being too small to detect or the materials in some compounds being the same as natural body products.
- (4) The approximate time the poison was taken.
- (5) The food or beverage that contained the poison. This information may assist the criminal investigator in ascertaining where the victim ate the food or drank the beverage. (If several days pass before death occurs, identification of the food or beverage that contained the poison may not be possible. For this reason, the investigator should carefully collect specimens of the vomit and urine during the earlier stages of sickness. Samples of the stomach contents removed by the stomach pump should be saved.)
- (6) The approximate time of death, if the victim died before medical or public authorities reached him.
- (7) A disease or accident that may have caused the death.

4. Investigating the Activities of the Victim. The criminal investigator should investigate the activities of the victim prior to the time he was poisoned.

5. Ascertaining the Source of the Poison. a. More important to the investigator than the actual poison is the material which contains the poison and is available for poisoning purposes, whether accidental or deliberate, suicide or murder. Few laymen have the information which allows them to purchase or obtain any

but the most well-known types of poison in *pars* form. However, there are many common retail products which contain poison. It is these materials that will be easily accessible to the poisoner, and, by their availability, be overlooked by the investigator. Included in this category are many antiseptics, some cosmetics, household sprays, paint and paint solvents, pesticides, liquid fuels, and patent medicines.

b. When determining the source of the poison, it is necessary to consider the general availability of the poison and the class of person who would have easiest access to the toxic substance. A poisoner normally will employ the poison with which he is familiar; this familiarity will depend on his past experience, his occupation, hobbies, or other activities. The following are possible sources:

- (1) Hospitals, dispensaries, laboratories, and pharmacies.
- (2) Offices, homes, and grocery stores. They may contain poisonous cleaning substances, rodent and insect poisons, and medicines that may be toxic if used improperly.
- (3) Depots, warehouses, storage areas, farms, and similar places, where rodent and insect poisons are kept.
- (4) Motor pools, fuel depots, and other places where fuels with alcoholic bases may be available.
- (5) Establishments where cleaning and solvent compounds containing poisons are kept or used.

(6) Illicit narcotics channels.

(7) Dealers in bad liquor.

6. **Collecting Physical Evidence.** When gathering and handling physical evidence, the criminal investigator should remember that—

a. There usually are few witnesses to the act of poisoning. Physical evidence, therefore, is important in proving who committed the crime.

b. The criminal investigator alone usually cannot exploit the physical evidence. The services of criminal investigation laboratory personnel or of medical technicians usually are required.

c. The physical evidence may not be limited to a poisonous substance. Evidence such as fingerprints, questioned documents, and particles of glass may be of great value.

d. Wherever possible, the following items should be obtained as evidence:

- (1) Remains of food and drink last taken.
- (2) Drugs, medicines, narcotics, or chemicals in the home of a suspect.
- (3) Glasses, bottles, spoons, etc., from which the victim may have drunk.
- (4) Soiled linen, clothing, etc., which may contain traces of poison.

e. It is absolutely necessary that physical evidence be taken into custody in a legal manner, properly marked for identification, and safeguarded by a complete chain of custody covering every person who has such evidence in his possession from the time it is seized until it is presented in court.

APPENDIX III

GUIDE FOR INVESTIGATING A BAD LIQUOR POISONING

1. *General.* a. Bad liquor poisoning cases involve the consumption of—

- (1) Beverages containing poisonous forms of alcohol.
- (2) Alcohol beverages improperly distilled, distilled from improper materials, or contaminated with toxic substances.
- (3) Beverages to which narcotics or other dangerous drugs have been added.

b. The victim may obtain bad liquor in numerous ways. He may buy it or he or some of his friends may make it from an alcoholic substance not intended for consumption. Standard brands of liquor may be "counterfeited." The methods for disguising nonpotable alcohol (alcoholic fuels and solvents, hair and face lotions, and nonpotable medicinal alcohol) vary. They may include elaborate redistillation or straining, or merely the addition of another substance to disguise the original taste. Liquor purchased in a foreign country may be bad liquor.

c. Purchases of bad liquor may be made from peddlers who loiter near places frequented by soldiers or from establishments where illegal liquor is sold. Rarely is bad liquor sold at a recognized retail establishment or at a place where the purchaser will drink it on or near the premises.

d. Bad liquor poisoning cases may occur—

- (1) When acceptable liquor is not obtainable.
- (2) After established closing hours for legal retailers.
- (3) When there are blackmarket transactions in liquor.

e. In some foreign countries where alcoholic beverages have a very high alcoholic content, a person may poison himself by the ingestion

of too great a quantity of the beverage in too short a time.

2. *When the Victim is Alive.* a. *Questioning the Victim.* The criminal investigator should make the questioning brief and to the point. He should ascertain:

- (1) Whether the victim knows where he drank the bad liquor.
- (2) Where the victim drank alcoholic beverages prior to the time he was stricken.
- (3) The names and addresses of persons and establishments where alcoholic beverages were served or sold to the victim.
- (4) The identity of companions (if any) who were with the victim.

b. *Comparing Statements.* If there are several victims, the criminal investigator should compare their statements and the statements of friends or acquaintances of each victim in order to determine whether the victims consumed the same brand of liquor or obtained their liquor at the same place.

c. *Informing Higher Authority.* Immediately after the source of the poisonous liquor is established, the criminal investigator should report his findings to the provost marshal. On the basis of these findings, the command and/or the provost marshal can take immediate action against military sources or military suspects, issue warnings, or take restrictive measures to prevent military personnel from coming into further contact with suspected civilian sources.

d. *Questioning Persons Connected with the Suspected Source.* The investigator should question supervisors, custodians, and employees at any military hospital, dispensary, warehouse, laboratory, motor pool, or mess hall suspected of being the source of the poison

liquor. For civilians not subject to the Uniform Code of Military Justice, the assistance of civilian authorities should be sought.

e. Taking Statements. Statements should be taken from all persons who were connected with or witnessed the distillation, conversion, mixture, or sale of the poison liquor. These statements should be compared closely for any discrepancies that would indicate or establish that these persons were aware that the liquor was poisonous before it was given or sold to the victim.

f. Examining the Premises. The premises of suspects should be examined thoroughly for any trace of the poison liquor and for materials or utensils that may have been used in mixing or storing it.

g. Collecting Evidence. Items of specific importance include—

- (1) Samples of illegal liquor that might be poisonous.
- (2) Samples of an apparently legal alcoholic stock that might have been contaminated with a questionable substance.
- (3) Samples of liquids or other substances found in barrels, cans, or jugs that might have contained a poisoned liquor or a toxic substance, or the containers themselves.
- (4) Samples of the contents of grease traps and plumbing traps, and of water in sinks used to dispose of the remainder of the poison liquor.
- (5) Samples of earth from places where the toxic substances may have been poured.

3. When the Victim is Dead or Unconscious.
If the victim is dead or unconscious, the investigator should—

a. Request an analysis of the victim's blood, urine, stomach contents, and/or organs.

b. Investigate the victim's place of work as a possible source of questionable alcoholic substances.

c. Canvass possible military and civilian sources of substances that a person might drink in lieu of acceptable liquor.

d. Question close friends and associates to determine if any of these persons may have had access to a source of the poison liquor and may have supplied it to the victim.

e. Trace the whereabouts of the victim prior to the occurrence of the symptoms and at the time the symptoms developed.

f. Establish where the victim ate his last meal before the symptoms occurred.

g. Ascertain from friends or associates what alcohol the victim consumed and where.

h. Compare information concerning food and drink consumed by the victim with information about items consumed by other persons at the same place and time and under approximately the same conditions.

i. Compare information concerning food and drink consumed by the victim with information about items consumed by other persons at the same place and time and under approximately the same conditions.

j. If necessary, arrange for civilian police to question known and suspected "bootleggers." A thorough search should be made at a military installation to discover persons who may be bringing illegal liquor onto the reservation.

k. Search for any illegal distillery on a military reservation, and submit for laboratory analysis both the produce and the ingredients used.

l. Question persons who may have been go-betweens in the illegal sale of the liquor or who might have knowledge of such sales, such as bellboys, doormen, waiters, and taxicab drivers.

m. Identify, and make purchases from, illegal sellers of liquor and submit such purchases to the criminal investigation laboratory for analysis. The criminal investigator should do nothing, however, that might later be construed as entrapment. When possible he should find out where individual peddlers are securing the liquor.

n. Examine military facilities for the disposal of edible garbage and waste and establish, where possible, the ultimate uses to which this refuse is put.

o. Secure the assistance of legal liquor deal-

ers. These dealers have a direct interest in preventing and uncovering this type of crime. Their assistance, normally secured through the provost marshal, is especially valuable when bad liquor cases recur in an area.

p. Relate investigative findings to preliminary medical findings and autopsy results as soon as they are available. The investigator should maintain contact with interested medical authorities.

APPENDIX IV

TABLE OF SYMPTOMS

This table lists symptoms which are common to both disease and poisoning together with the diseases and poisons which cause them.

Symptoms	Poisons	Diseases
Vomiting	Arsenic, antimony, corrosive acids and alkalis, barium, cantharides, digitalis, copper, iodine, mercury, phosphorus, phenols, alcohols, zinc, poisoned foods	Gastritis and enteritis, gastric and duodenal ulcer, cholera, uremia, acidosis, early pregnancy, brain tumor, onset of many infectious diseases.
Convulsions	Brelicine, camphor, cyanides, strychnine, etc.	Uremia, eclampsia, tetanus, epilepsy, many acute diseases of the cerebrospinal system, especially meningitis.
Coma	Opium and its alkaloids and derivatives, chloral, sulfonal, trional, tetrional, barbitalates, such as amytal, phenobarbital, nembutal, etc., paraldehyde, chloroform, cyanides, CO, CO ₂ , atropine, hyocine, scopolamine, large doses of alcohol, etc.	Uremia, eclampsia, acidosis, cerebral hemorrhage, cerebral hemorrhage, cerebral embolism and thrombosis, brain injuries, epilepsy, and other brain diseases.
Contraction of pupil	Derivatives of opium, physostigmine, pilocarpine, muscarine.	Typhoid and some other diseases of the central nervous system.
General or partial paralysis	Cyanides, CO, CO ₂	Apoplexy, brain tumor, botulism, meningitis.
Dilatation of pupil	Belladonna and its derivatives, hyocyamine, stramonium, gelsemium, cocaine, nicotine.	Those causing optic atrophy, sympathetic irritation of oculomotor paralis.
Slow respiration	Opium and its derivatives, CO, hypnotics.	Uremia, compression of the brain from any cause.
Rapid respiration	Atropine, cocaine, CO ₂ , etc.	Acute respiratory diseases lesions of medulla, hysteria.
Delirium	Atropine, cocaine, cannabis (hashish or marihuana).	Epilepsy, insanity, delirium tremens, organic brain diseases such as meningitis, encephalitis, etc., nephritis, etc.
Dyspnea	Strychnine (during the convulsions), cyanides, CO.	Those of cardiac and respiratory systems, lesions of medulla and vagus
Cyanosis	Nitrobenzene, aniline, acetanilide, opium.	Same as dyspnea, prolonged convulsions due to any cause.
Impairment of judgement	Hallucinogenic drugs (LSD, peyote, nutmegs, etc.)	Schizophrenia or other mental disorders, epilepsy.
Loss of reality Depression, extreme fear Suicide		